Reserve METOC Support to the Navy's Geographic Information Systems (GIS) Capability Needs

- This presentation is a progress report on a study into the potential use of Reserve Navy METOC personnel to enhance the Navy's capabilities involving Geographic Information Systems (GIS).

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- **Date: 05/01/2004**

NAVAL METEOROLOGY AND OCEANOGRAPHY COMMAND

COMNAVMETOCCO

NGA Mission:

“to provide <u>timely</u>, <u>relevant</u>, and <u>accurate geospatial intelligence in support of the national security objectives of the United States</u>”

NGA Established
1 October 1996

Incorporated entirely…

- ***Defense Mapping Agency***
- ***Central Imagery Office***
- ***Defense Dissemination Program Office***
- ***National Photo Interpretation Center***

Incorporated imagery program elements of…

- ***Defense Airborne Reconnaissance Office***
- ***National Reconnaissance Office***
- ***Defense Intelligence Agency***
- ***Central Intelligence Agency***

Background:

- Geographic Information Systems (GIS) technology is slowly becoming a common part of every day life: If we want to know how to get to a location, or the distance is between two locations, we now simply go on the Internet and easily access the answer electronically from some digital database.

- What is Geospatial Intelligence?
  - Information about any object--natural or man-made--that can be referenced to a specific location on the earth.

- Geospatial intelligence can take many forms:
  - Mono and stereo imagery
  - A map, chart, or navigation aid, whether on paper or electronic medium
  - Digital elevation and terrain assessment data
  - Geophysical data (e.g., gravity, geodesy, magnetics)
  - Nautical and aeronautical safety information
  - A set of coordinates associated with a feature description

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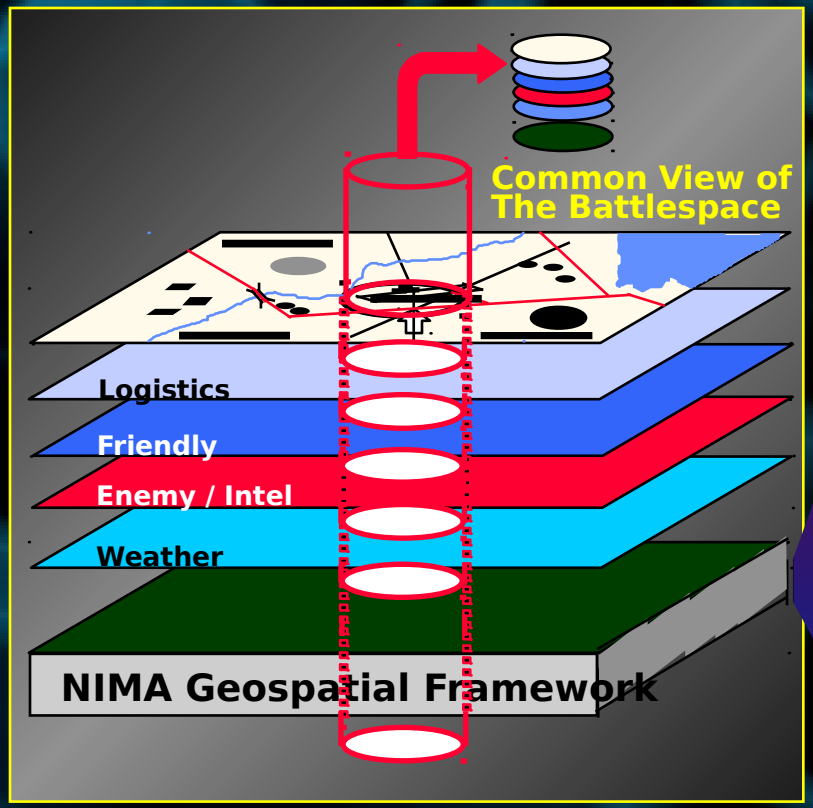
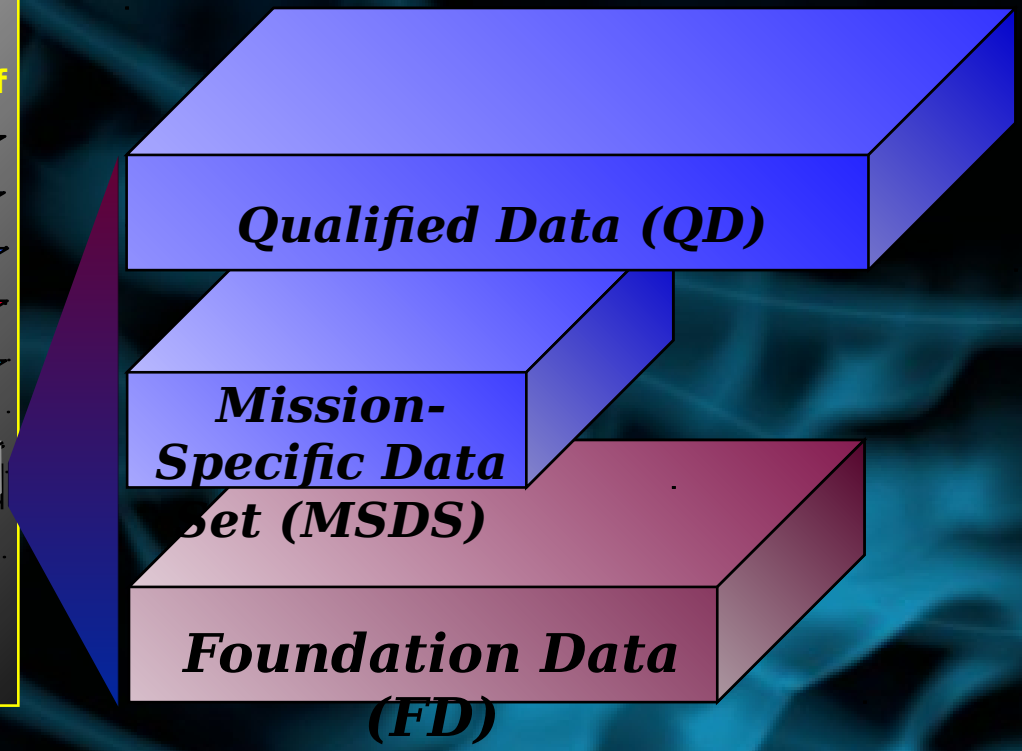
The battlespace is also now viewed within a GIS framework:





Critical Need for GIS Expertise

- As GIS databases and the associated application technologies become more and more embedded into our military's offensive and defensive tactics and procedures, the need for personnel trained in GIS is also rapidly expanding.

- **National Geospatial Intelligence Agency (NGA):**
  - NGA's Reserve Intelligence Unit currently has a substantial need for METOC reservists (1805s and AGs) to provide geospatial support: 17 O's / 25 E's
  - TS/SCI clearances are required, but interims can be granted for personnel in a training status
  - NGA's production directorate may even be able to supply funding to purchase some billets (CAPT R. Meyer, 29APR04)

GIS Focus Requirements Summary

• Clearance Required: TS/SCI, however can train using Interim

• Prerequisites: GIS Training Track (under development)

Minimums:
(CD Training)

- GIS for the Warrior
- 1-2 NGA Courses
- 7412 NEC

• Justification: operational support to Sea Power 21, specifically Sea Strike (Expeditionary Strike Groups), Sea Shield, COP

• Commitment: minimum 3 years, due to training requirements

GIS Focus Training Courses

- **GI&S for the Warrior (2 days)**
- **Geographic Information Systems Course (5 days)**
- **GI&S for the Warrior – CD Learning Module**

Backup slides

Potential Mission Evaluation Schedule

The project milestones are delineated below. Preliminary completion dates have been established f

Target Completion Date	Major Milestone	May 2004 Assessment
	Customer Needs Analysis	
Jun-04	Identify Reservist GIS Expertise requirements	On track
Jul-04	Identify Training / Courses Requirements	On track
Jul-04	Identify Critical Manning Requirements	On track
Oct-04	Presentation to CNMOC for Implementation Consideration	Not started
Dec-04	Develop Long Term Active Duty Support Strategy	Not started
Jan-05	Reserve Personnel Identification / Inventory	Not started
Jan-05	Develop Project Metrics	Not started
Mar-05	Review / Update Reserve Manning & Training	Not started
Oct-05	Revisit/ Refine Long Term Active Duty Support Strategy	Not started

GI&S for the Warrior

CIN: N/A
COURSE LENGTH: 2 Days
TRAINER: Various (MTT)
CLEARANCE: SECRET

PREREQUISITES: None.

PURPOSE: This course teaches GI&S issues that have an operational impact on a command's mission. Blocks of instruction with nominal teaching time are listed below although shorter overviews can be taught:

- Datums and Coordinates
- Product accuracy
- Foundation Data Concepts
- Map Updating / Real Time

Navigation

- Introduction to GPS
- Introduction to GIS

Geographic Information Systems Course

CIN: N/A
COURSE LENGTH: 5 Days
TRAINER: NGIS – Ft Belvoir
CLEARANCE: SECRET

PREREQUISITES: None.

PURPOSE: An introductory level course designed to provide a working foundation in Geospatial Information Systems. The class consists of approximately 40% lecture and 60% practical exercises. The lectures focus on GIS theory, concepts, and processing techniques while the practical exercises reinforce the lectures through hands-on application using ArcGIS 8.x software. Emphasis is on the use of Geographic Information Systems (GIS) to exploit Federal and NGA Digital Data to solve geospatial problems.

GI&S for the Warrior – CD Learning Module

- **Fundamentals**
  - Datums & Coordinates
  - GI&S Product Accuracy
  - Intro to GPS
  - Intro to RSI & GIS
- **Products & Services**
  - Digital Products
  - Catalogs
  - Distribution
  - Information Access
  - NIMAMUSE
  - FalconView
  - ArcView/NIMA-in-a-Box
  - FUND
  - Terrabase II

NGA Service Resident Training

Topographic Analyst

- Basic Terrain Analyst Course - 18 Weeks
- Advanced Terrain Analyst Course - 18 Weeks
- Basic Topographic Course - 37 Weeks

Officer Courses

- Topographic Operations Management Course - 2 Weeks
- GI&S Joint Staff Officers Course - 1 Week
- Geographical Data Digital Users Course - 1 Week
- Terrain Analyst Warrant Officer Certification Course - 6 Weeks
- Advanced Topographic Warrant

Survey

- Basic Geodetic Survey Course - 13 Weeks
- Advanced Geodetic Survey Course - 17 Weeks

Photolithography

- Basic Lithography Course - 20 Weeks
- Reproduction Equipment Repair Course - 20 Weeks
- Advanced Lithography Course - 7 Weeks